

## EPA Official Record

**Notes ID:** 26A602A0658F17C622F5F65B48526BF4

**From:** Chris Hill <chris.hill@chk.com>

**To:** "Florentino, Gene" <GFlorentino@ene.com>; Robert Puls/ADA/USEPA/US@EPA

**Copy To:** "Lukert, George" <GLukert@ene.com>; Susan Mravik/ADA/USEPA/US@EPA

**Delivered Date:** 09/17/2011 02:09 PM EDT

**Subject:** RE: EPA HF Study - EPA Stakeholder Meeting

ATTACHMENT: image001.png

Yes, 6 months is the average time between the spud date and completions, as was discussed during our 9/2/2011 conference call. Based on this meeting, it was my understanding that this time frame was acceptable. I would be more than happy, and was plan, to discuss the schedule during our F2F meeting Monday morning.

As far as the rationale behind the schedule, Chesapeake manages resources based on a number of variables that are not necessarily site specific. There is typically a period of time between drilling and completions (e.g., hydraulically fracturing). The 6 month estimate factors in this duration.

Please let me know if you have any additional questions. I look forward to our discussion on Monday.

Thanks,

Chris

From: Florentino, Gene [mailto:GFlorentino@ene.com]

Sent: Saturday, September 17, 2011 12:53 PM

To: Puls.Robert@epamail.epa.gov; Chris Hill

Cc: Lukert, George; Mravik.Susan@epamail.epa.gov

Subject: Re: EPA HF Study - EPA Stakeholder Meeting

Ditto! Seems awefully long to drill/frac. Is there a hiatus betwn drlging + fracing?

From: Puls.Robert@epamail.epa.gov

To: chris.hill@chk.com

Cc: Florentino, Gene; Lukert, George; Mravik.Susan@epamail.epa.gov

Sent: Sat Sep 17 13:47:56 2011

Subject: RE: EPA HF Study - EPA Stakeholder Meeting

6 months?!?

Robert W. Puls, Ph.D.

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-----Chris Hill <chris.hill@chk.com> wrote: -----

To: "'Florentino, Gene'" <GFlorentino@ene.com>  
From: Chris Hill <chris.hill@chk.com>  
Date: 09/17/2011 12:23PM  
Cc: Susan Mravik/ADA/USEPA/US@EPA, Robert Puls/ADA/USEPA/US@EPA, "'Lukert, George'" <GLukert@ene.com>  
Subject: RE: EPA HF Study - EPA Stakeholder Meeting

Gene,

I can currently only provide an estimates for timing. Based on conversations with Ops, the completions (e.g., Fracturing) equipment is typically mobilized to the site approximately 6 months after the spud date. The duration of the fracturing process is approximately 2 weeks.

Please let me know if you have any additional questions. I look forward to seeing you Monday.

Thanks,  
Chris

From: Florentino, Gene [mailto:GFlorentino@ene.com]  
Sent: Friday, September 16, 2011 1:24 PM  
To: Chris Hill  
Cc: Mravik.Susan@epamail.epa.gov; Puls.Robert@epamail.epa.gov; Lukert, George  
Subject: RE: EPA HF Study - EPA Stakeholder Meeting

Chris,

Quick question about schedule. About how long do you estimate between the Spud date and completion of well drilling (including fracing)?

Thanks,

Gene

From: Chris Hill [mailto:chris.hill@chk.com]  
Sent: Tuesday, September 06, 2011 7:08 PM  
To: puls.robert@epa.gov; overbay.michael@epa.gov; Quina, Chris; John Satterfield; EPA.HF.Study.Cal@sp.mychk.com; Lukert, George; Florentino, Gene; Mravik.Susan@epamail.epa.gov; Cassi Vann; Galloway, Marcia; Debby McElreath; Bert Smith; Nancy Coleman  
Cc: Mike Brownell; Fonda Manwell  
Subject: EPA HF Study - EPA Stakeholder Meeting

The meeting minutes for last Friday's conference call are provided below. I would appreciate if you would keep me honest and let me know if I missed anything from our discussions.

9/2/2011 Minutes:

- Schedule
- o Tentative milestones:
  - \$ Land owner agreements 10/3/11
  - \$ Monitoring well construction 11/15/11
- o Spud date has been set for 3/21/2012; this date could be pushed back to a date no later than 4/31/2012
- o Pad construction will begin at least 3-4 weeks prior to the Spud date.
- o Well completion is typically begins 6 months after Spud date (approximately September 2012)
- o Production typically begins 2 months after well completion (approximately November 2012)
- o EPA intends to sample for approximately 12 months after production begins.

- Quality Assurance Project Plan (QAPP)
- o EPA will need to finalize the QAPP document at the end of September.
- o ACTION: CHK should provide all comments to the EPA by September 12th, 2011.
- o CHK has requested a copy of the EPA proposed analytical methods/SOPs. CHK would like to compare EPA methods to the methods to be utilized by CHK to ensure that the same methods are utilized by both parties and to provide input on these methods if necessary.
- o ACTION: Verify with Director that EPA analytical methods can be released to outside party (Bob, 9/9/2011 IN PROGRESS)
- o CHK has requested that the design plan for geophysical study be included in the QAPP so CHK can provide comments as necessary.
- o ACTION: Design plan for geophysical work to be included in the QAPP (Bob, 9/7/2011)

## · Monitoring Wells

o Current monitoring well design plan indicates that monitoring wells will be installed on the pad site (3 to 15 meter radius from production well). CHK has indicated that this is not acceptable for a number of reasons, including:

\$ Equipment activity during pad site construction could compromise or damage the monitoring wells

\$ Any fencing or diversionary structures for the monitoring wells could hinder development activities necessary for pad construction and drilling/HF activities

\$ Unnecessary risk to personnel.

\$ Louisiana regulations may require setbacks for water wells from possible sources of contamination, and require production well setbacks from any water well

o ACTION: Request that CHK Regulatory and Operation Management weigh in on monitoring well location discussion (Chris, 9/9/2011 IN PROGRESS).

o ACTION: EPA to review Louisiana regulations regarding production well setbacks from water wells and setbacks for water wells from possible sources of contamination. (Mike O., 9/9/2011 IN PROGRESS)

o Additional options for monitoring well location/installation were discussed. These methods include:

\$ Directionally drilled monitoring wells

\$ Install wells prior to pad site construction to conduct baseline sampling; decommission wells to allow for pad construction, and then reinstall monitoring wells to resume sampling activities. CHK has indicated this is not preferred.

o ACTION: E&E to develop additional design plans for monitoring well location and installation to provide further options for discussion (Gene, 9/12/2011 IN PROGRESS)

o ACTION: CHK to speak with Operations regarding standard layout design plan for pad sites to aid in monitoring well location discussions (Chris, 9/9/2011 IN PROGRESS)

o Additionally, EPA has suggested the possibility of utilizing a geo-probe for installation of shallower wells to gather baseline data. CHK has indicated this is not preferred.

## · Communication Plan

o ACTION: Develop a draft communication plan (Chris, 9/12/2011 IN PROGRESS)  
Draft communication plan will be provided to EPA along with QAPP comments by September 12th, 2011.

## · Data Management

o Data sharing between CHK/EPA will be necessary during study.

- o EPA has indicated that all analysis will be made available to CHK via FTP site.
- o ACTION: EPA to develop FTP site for all study data and materials and will provide CHK with access. (Bob, 9/9/2011 IN PROGRESS)
- o ACTION: CHK and E&E to provide EPA with names and contact information for all parties requiring access to FTP site. (Chris, 9/6/2011 IN PROGRESS)

Meetings

- o Meetings will be moved to Monday afternoons at 1:00 pm until further notice.
- o Due to the holiday, the next meeting will be September 9th, 2011.
- o ACTION: Change September 9th meeting time to 11:00 -12:00 am (Chris, 9/2/2011 COMPLETE)
- o Face-to-face meeting scheduled for Monday September 19th, 2011. Meeting is anticipated to be for half-day.
- o ACTION: Schedule face-to-face meeting (Chris, 9/6/2011 IN PROGRESS)

Thank you,

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Chesapeake Energy Corporation  
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Fax: (405) 849-2321  
E-mail: Chris.Hill@chk.com

[IMAGE]

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